

**GOVERNMENT OF INDIA
AGRICULTURE
LOK SABHA**

UNSTARRED QUESTION NO:5957
ANSWERED ON:06.05.2002
GENETICALLY ENGINEERED COTTON AND RICE
PUSHPDAN SHAMBHUDAN GADHAVI

Will the Minister of AGRICULTURE be pleased to state:

- (a) whether any research has been made by the Indian Council of Agricultural Research (ICAR) to protect rice and cotton from pests and rodents;
- (b) if so, the details thereof;
- (c) the details of the other projects undertaken by the ICAR under the National Agricultural Projects;
- (d) whether the genetically engineered improved cotton and rice is also likely to be made available to the farmers; and
- (e) if so, the details thereof?

Answer

THE MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE (SHRI HUKUMDEO NARAYAN YADAV)

(a) Yes, Sir.

(b) The Indian Council of Agricultural Research (ICAR) since its inception has focussed on developing resistant varieties to different diseases, insect and rodent pests of cotton and rice and their control measures through the use of insecticides/rodenticide/biopesticides and other agronomic manipulations. Also easily adaptable and economically viable Integrated Pest Management (IPM) strategies have been developed for the control of major pests including rodents of rice and cotton.

(c) Projects undertaken through financial support of the National Agricultural Technology Project (NATP) are presented as Annexure I.

(d) Yes, Sir.

(e) Three transgenic Bt cotton hybrid developed by Maharashtra Hybrid Seed Company (Mahyco) namely Bt MECH 12, Bt MECI 162, and Bt MECH 184 have been granted approval for commercial release by the Genetic Engineering Approval Committee (GEAC) of the Ministry of Environment and Forests. In so far as development of genetically engineered rice crop is concerned, the transgenics are in preliminary stages of development and evaluation.

Annexure I

ICAR Projects under National Agricultural Technology Projects

S.No.	Name of the Project	Place of Operation
1.	IPM in rice and cotton ecosystems - technology improvement, validation and transfer.	TNAU, Madurai
2.	Improving the bio-efficacy and persistence of neem in pest management of rice and rice based cropping systems.	TNRRI, Thanjavur
3.	Mycopesticides - improvement of production and formulation technologies for management of major insect pests on cotton	AU, Visakhapatnam

4. Role of Microbivorous nematodes in nutrient mineralization in Rice-Wheat agroecosystem to promote sustainable agriculture IARI, New Delhi

5. Mycoinsecticide and Botanaical for Management of Rice pests in Assam AAU, Jorhat

6. Development of Integrated Disease Management Strategies for sheath Blight Disease under Rice-Rice Cropping system AAU, RRS, Titabar

7. Isolation of secondary metabolites from fluorescent pseudomonas and their bioefficacy against pathogens of Rice NARDI, Secundrabad

8. New Approaches to Integrated Pest Management in Rainfed Rice based Production Systems Director of Rice Research, Hyderabad

9. Development of adaptable IPM in Rice Wheat Cropping system NCIPM, New Delhi

10. Impact of pesticides on soil-biota and non targeted Organisms in rice. BHU Varanasi-221005 (UP)

11. Control of leaf curl disease in cotton and development of protocols for mass multiplication of predators, parasites and insects pathogens CICR, Nagpur-440010 (MS)

12. Development of Weather Based Fore-warning system for Crop pests and Diseases CRRI, Cuttack

13. Bt Transgenic pigeonpea, rice cotton for insect resistance NRCPB, IARI, New Delhi

14. Molecular marker assisted selection for bacterial leaf blight resistant in rice CCMB, Hyderabad

15. Socio-economic and environmental consequences of IPM technology adoption on rice. TRRI, Aduthurai, Tamil Nadu

16. Isolation of secondary metabolites from fluorescent pseudomonads and their bioefficacy against pathogen of rice. NARDI, Hyderabad

17. Comparative mapping of cereals (Rice, Finger Millet and Sorghum) and identification of agronomically useful genes with special reference to drought, disease resistance and grain yield UAS, Bangalore

18. Identification of molecular markers linked to the gene for resistance to Rice Hispa (*Diuraphis armigera* oliv.) in rice AAU , Jorhat

19. Development of Bt transgenic diploid cotton against bollworm. CICR, Nagpur

